The P.S.E.S. has been fortunate in the help so readily given by the Admiralty, the War Office and the Royal Geographical Society. All these have lent instruments. This year the entire survey equipment has been lent by the War Office and the entire radio equipment by the Admiralty, who have also, as in former years, arranged for their Whitehall Signal Station to exchange messages every night during the expedition with the base camp.

An important result of these expeditions has been to develop in many boys a desire to explore. In this way they have largely contributed to the ranks of the Oxford University Exploration Club, and it is hoped that those members who go up to Cambridge will get into touch with the Scott Polar Research Institute so that they may gain further encouragement to continue along the path on which they have been started by the P.S.E.S.

This article cannot be concluded without mention of a matter of much importance, not only to P.S.E.S. expeditions, but also to those who organise exploring expeditions anywhere. It is noticeable that in the majority of cases one or more doctors are taken who are not experienced in major surgery. It may well be asked how would a physician be able to deal with an operation for appendicitis or other acute abdominal condition during an expedition? The need then would be for a thoroughly experienced surgeon capable of operating under much more difficult conditions than he would find at home. It is running a risk to take only physicians. On this principle a surgical specialist has always been included in P.S.E.S. expeditions. The wisdom of this precaution became manifest in 1937 when a boy developed acute appendicitis and was operated on at ten o'clock at night under the forest trees by the light of electric torches held by assistants and with the mosquitoes cruelly biting the legs of the surgeon who was in shorts. The appendix was successfully removed and the boy was up in a fortnight, perfectly well.

G. MURRAY LEVICK

WORK OF THE UNITED STATES COAST AND GEODETIC SURVEY IN ALASKA, 1944–46

[From notes in the *Annual Report of the Governor of Alaska to the Secretary of the Interior*, 1945, p. 8, and 1946, pp. 12–13.]

During 1944–45 surveys of the waters and coast of Alaska were continued. All work of this nature was restricted to strategic areas of vital importance to the military forces, where marine charts for safe navigation have not been available in previous years. Triangulation work continued, providing horizontal and vertical control for mapping and for other military and engineering projects. Four new nautical and thirty aeronautical charts of Alaska and the Aleutian Islands were constructed and reproduced for the use of the armed forces.

In 1946 the coast triangulation was extended along the Aleutian chain to Attu. It was also being extended across the Alaska Peninsula to Bristol Bay and the Bering Sea, in order to furnish horizontal control for mapping in the Bristol Bay area. More new charts were issued in 1946. Three new nautical charts were produced of the coastal waters of Alaska, including the Point

Barrow and Cape Wrangell areas. Sixteen world aeronautical charts and fifteen flight charts covering the greater part of Alaska and all the important air routes were produced during the year. Supplements were published to Parts I and II of the *Alaska Coast Pilot* and to the *Special Coast Pilot of the Aleutian Islands*; the latter remains in a "restricted" category.

In addition to the annual tide and current tables for Alaska, tide and current tables have been published for the Aleutian Islands, incorporating data previously published in special tables for military use.

The Magnetic and Seismological Observatory at Sitka continued in operation for the purpose of obtaining basic magnetic data for the control of magnetic surveys. Additional magnetic data were obtained by the staffs of the survey ships working along the Alaska Peninsula and among the Aleutian Islands.

COLLEGE GEOPHYSICAL OBSERVATORY, ALASKA

[Based on information supplied on 13 January 1947 by Ernest Wolff, Observer-in-Charge, College Geophysical Observatory.]

A plan for the establishment of a Geophysical Observatory and Institute at College was conceived by President Bunnel of the University of Alaska, over ten years ago. The project passed through many vicissitudes. In 1941 new life and support were received when the Department of Terrestrial Magnetism of the Carnegie Institution of Washington established an observatory at College. Work has continued there, and it now seems probable that the original plan for a Geophysical Observatory as a part of the University will in fact mature. Federal funds have been authorised, but not yet appropriated.

The College is in the zone of maximum auroral activity. It is 5 miles west of Fairbanks at lat. 64° 51′ N. and long. 147° 49′ W., and is situated at a height of 1250 ft. (387 m.).

VISITS TO THE NORTH POLE

[Based on a note by D. Karelin in *Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva* (*Annals of the All-Union Geographical Society*), Vol. 78, No. 1, 1946, pp. 123–24.]

Until the spring of 1946 the North Pole, or the air above it, has been reached by man on seventeen occasions. A list of these is given below:

(1) R. Peary, 6 April 1901, by foot over the ice from Grant Land.

(2) R. Byrd, 9 May 1926, by aircraft from Spitsbergen.

(3) R. Amundsen, 13 May 1926, by dirigible from Spitsbergen.

(4) Italian expedition, 24 May 1928, by dirigible from Spitsbergen. The dirigible crashed on the return journey.

(5) P. Golovin, 5 May 1937, by aircraft from Franz Josef Land.

(6) M. Vodop'yanov, 21 May 1937, by aircraft from Franz Josef Land, landing on the ice with I. Papanin and others of the Drift Station wintering party.